

O No	Supplier	Line Item No	Rei No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Serial No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Suppl Nam
	MEC002- VU	1	1	Net 30	M7075 T680.375X6.000	7075-T6S Sheet .375" Thick Plate X ""Wide : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A- 250/12 OR AMS-QQ-A- 250/12 OR AMS 4045 OR ASTM B209 receive ft				12	11/28/2017	92		\$017377	Stock	12/5/2017	\$ 25.68 / ft	0		\$308.16	Metau Castle
		2		The same	M707516S0.375X8.000							12		S017378	Stock	12/5/2017	\$30.75/ft	0		\$369.00	Metau Castle
		, 4				15						√ 12		S017379	Stock	12/5/2017	\$ 20.12 / R	0		\$241.44	Metau Castle
		/ 5				100				A		o 24	-	S017380	Stock	12/5/2017	\$ 21.06 / ft	0.		\$505.44	Metau Castle
		6		4	M7075T6S1.750X2.250	Foceive ft F075-T6 Sheet 1.750" X 2.250": MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A- 250/12 OR AMS-QQ-A- 250/12 OR AMS-QQ-A- AMS 4045 OR ASTM B209						V24	U,	5017381	Stock	12/5/2017	\$ 28.62/ft	0		\$686.88	Metau Castle
		9		ā	И7075T6S7.000X2.000	receive ft 7075-T6S Sheet 7" Thick Plate X 2" Wide: MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A- 250/12 QR AMS-QQ-A- 250/12 QR AMS-QQ-A- AMS 4045 QR ASTM B209						24	-	5017382	Stock	12/5/2017	\$ 78.52 / ft	0		\$1,884.48	Metau Castle

1/2

INTERORG TRANSFER PACKING SLIP/ CERTIFICATE OF CONFORMANCE

693-377046

Page 1 of 2

Shipment No:3442525

20-NOV-17 ORIGIN Prepaid YRC	Date Shipped F.O.B. Freight Terms Carrier	USA L5N 2K7 CAN	PARAMOUNT, CA 90723 HAWKESBURY, ON K6A 1K7 MISSISSAUGA, ON	14001 ORANGE AVENUE 1270 ABERDEEN 2150 ARGENTIA ROAD	A. M. CASTLE & CO. DART AEROSPACE LTD A. M. CASTLE & CO.	Snip From: Sold To: Snip To:
YRC 3442525-2	er	1 2K7 CAN K6A 1K7 CA				p lo:

Delivery No. Mill/Source Heat Number Mech Id PCS Width (IN) Length (IN) 121446201 CONSTELLIUM 1	Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS	DetailS ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S	38327 1.00 PCS 1.00 F	Purchase Order No Part Number Ordered Qty Invoice	.0000 IN) - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12	4957928 1 752114.MO 1,2500.PL.7075.T651.ALUMINUM.USI.48.5000.144.5000	Order No Line No Item No Description	Shipment Details Final Destination Branch - TOR	
N) Length (IN) Shipped Qty(LBS) 34.1721	2 PIR	VE AT TIME OF DELIVERY	1.00 PCS	Invoice Qty	SAW SPECIFICATIONS:	M.USI.48.5000.144.5000			

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned

Date Printed: 20-NOV-2017 04:38:15 PM

INTERORG TRANSFER
PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Date:

Reviewed by Authorized Castle Metals Representative:

Name:

Page 2 of 2



P-860-155D REVISED: 10 2014



CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

	CASTLE 8	& CO.					5	AM	CASTLE	
	1 ORANG MOUNT 0 3						LD	1420 OAK 1 60523 US	BROOK IL	GTON ROAD, SUITE 2 -
0			_	1			0			
A M CASTLE	11054	9073	4075		INCLUS	SION	Seri	al:20170	628-01105	49073 Pg 1of2
CUSTOMER PUR 419158	RCHASE OI	RDER N	IO. & ITEM	2	Constell 02980	lium ORDE	R NO.	met	llium Rolled tal shipped	RTIFICATION Products, hereby certifies under this order has been
ALLOX CLAD	TEMPE T651	1.250	GE 000 in 5 mm	WIDTH 48.5000 1,232 m	o in	LENGTH (44.5000 3,670 mm	Oin	require indicate shown	ments of the difference of the difference of the difference on the difference of the	und in conformance with the applicable specifications Any warranty is limited to follow Rolled Products' stand
ITEM ORDERED SPEC PLATE, SA MILL FINISH	WED							repor	ts are on f ellium Rolle	and Conditions of Sales. Te file, subject to examination. d Products Ravenswood, L 9 Century Road
CUSTOMER SPE AMS 4045K	CIFICATIO	N								P.O. BOX 68 OOD, WV 26164 USA
PART NUMBER 752114			B/L NUME 83075	BER	DATE 06/28/	SHIPPED 2017			Ster	Sul
WT. SHIPPED 2700.000 LB		NO. OF	PIECES	GOVT. C	ONTRA	CT NO.			Stave	Good - Laboratory Manage
									Oreae	GOOD - Laboratory manager
ASTM B594 REV AMS QQ-A-2500 AMS-STD-2154A ASTM B209-14 BSS-7055B 2013 CST1006 REV E DPS 4.713 REV GAMPS 9101 RE PS 21211P 2010	2A 2012 TYPI CLASS A 2011 CLAS AK 2012 CL V B 2006 C	E1 CLAS 100% S S A 100 ASS A CLASS A	SS A 100% ONIC TES' % SONIC I 100% SON A 100% SO	SONIC M TED MINU MINUS DE IIC MINUS NIC MINUS	INUS DEAD ADZON DEAD S DEAD	EADZONE DZONE NE ZONE				
Load Details							-/	,		
Packag		Net Lb		Kg		Lot	Pi		Serial	Parent Lot
1001521		900.0		408.		960088		01		
1001521		900.0	• •	408.		960088		02		
Lot: 960088	300	900.0	00	408.	233	96008	00	03		-
Tensile - Room	Temperatu			V	iold /VC	20	El	nastion	1961	Report
			te (KSI)		ield (KS			ongation	(%)	Кероп
Direction	Tests	Min	Max		in	Max	Mi		Max	
LT	02	81.2	82.1	7	1.1	72.2	11	.5	12.5	
Tensile - Room	Temperatu		ite (N/MM2	<u>2)</u> Y	ield (N/	MM2)	Ele	ongation	(%)	Report
1										
Direction	Tests	Min	Max	. N	lin	Max	Mi	n	Max	





CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

S H I P	1400 PARA 9072 US		ANGE NT CA	AVE					XII.	S O L D		A M CASTLE 1420 KENSINGTON ROAD, SUITE 220 OAK BROOK IL 60523 US al:20170628-0110549073 Pg 20f2
	OMER PU		E ORD		4075	И	TC	onstelliu 02980				CERTIFICATION "Constellium Rolled Products, hereby certifies that
SPE		T6:	MPER 51	1.250	GE 000 in 5 mm	WID7 48.50 1,232	0000) in 1	ENGTI 44.500 ,670 m	00 in		metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road
	TOMER SP 4045K	ECIFICA	ATION						, ,, , , , , , , , , , ,	-		P.O. BOX 68 RAVENSWOOD, WV 26164 USA
PAR 7521	NUMBER				B/L NUM 83075	BER		DATE SI 06/28/20)		Steve Soul
	SHIPPED .000 LB			0. OF	PIECES	GOVT	. C(ONTRAC	ΓNO.			Steve Good - Laboratory Manager
Cher	nistry (Actu	ual)										
Core		SI 0.07	FE 0.17	CU 1.41	MN 0.06	MG 2.57	CF 0.2		T1 0.0		ZR 0.0	
OTH	ERS-EACH	: .05 M	AX. 01	HER	S TOTAL:	.15 MA	X. /	AL REMA	INDER			
QU.	naterial con	TS:	in this	lot w	as cast a	nd man	ufac	ctured in	the US	A		
AIVIO	ON-TOPUSE	3187										

THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

CHEMISTRY BY OES: ARKSPARK
CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT
WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399
WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557

DUNS Number: 090570149; CAGE Code: 1YWL9

Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.

"END OF CERTIFICATION"

P-860-155D REVISED: 10 2014

CERTIFICATE OF CONFORMANCE INTERORG TRANSFER PACKING SLIP/

Page 1 of 1

Shipment No:3442525

Ship From:		Sold To:	Ship To:	Deliver To:
A. M. CASTLE & CO. 14001 ORANGE AVENUE PARAMOUNT, CA 90723 USA		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA
Date Shipped	F.O.B.	Freight Terms	Carrier	BOI No
20-NOV-17	ORIGIN	Prepaid	YRC	3442525-2

Shipment Details	slis			Final D	Final Destination Branch - TOR	nch - TOR		
				/				
Order No	Line No	Item No		Description	tion			
4952710	-	750067.MG) OM	0.3750.	PL.7075.T651.	0.3750.PL.7075.T651.ALUMINUM.48.5000.144.5000	5000.144.50	00
				CUT 2S	IDED TO 6 IN	(+.0620/0000	J IN) X 144.E	CUT 2SIDED TO 6 IN (+ .0620/0000 IN) X 144.5 IN () ALUMINUM
				PLATE	SAW SPECIFIC	PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12	-QQ-A-250/	12
Purchase Order No		Part Number		Ordered Qty	1 Qty		Invoice Qtv	ţ
38327				1.00 PCS	S		1.00 PCS	
Details	ALL PAF	ERWORK MUS	ST FOLLOW OR	DER / CU	STOMER MUS	ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY	TIME OF DI	ELIVERY
	ALL MA	<i>TERIAL MUST F</i>	ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S	ING MARI	KINGS EX:HE	AT #'S		
	Email P/	s and certs to: (Email P/s and certs to: clavoie@dartaero.com	o.com		(1
	END US	END USER: DART AEROSPACE	OSPACE					
	END US	E: COMMERCI	END USE: COMMERCIAL AIRCRAFT PARTS	ARTS	^	X	+)
Delivery No.	Mill/Source	Heat Numbe	_	Mech Id	PCS	Width (IN)	enath (IN)	Width (IN) Length (IN) Shipped Otv(LBS)
121446201	KAISER ALUMINUM	2 4 5 1 5 8	₹		-			34.0636

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications for the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material out or crect size, or material and the correct size of the correct size, or material and the correct size of the correct size, or material and the correct size of the correct size, or material and the correct size of the correct size, or material and the correct size of the correct size, or material and the correct size of the correct s

Name:

Date:

Date Printed: 20-NOV-2017 04:38:15 PM

SHIP TO: A M CASTLE & CO 14001 ORANGE AVE P.O. BOX 1402 PARAMOUNT, CA 90723

SOLD TO: AM CASTLE & CO- SOLD TO 1420 KENSINGTON RD SUITE 220 OAK BROOK, IL 60523

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215 Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number 4481839

0,				CUID	RUN/LOAD:	GOV'T CONTRAC	T NUMBER:	
CUSTOMER PO NUMBER:	WORK PACKAGE:	CUSTOMER PAR 750067	T NUMBER:	1040	70/8			
438454-1 KAISER ORDER NO:	SHIP DATE;	ALLON	CEAD.	1 Promotion	Sawed P	DESCRIPTION:		
1244225-1	1	7075 CK B/L #:	BARE 0.3750	1000	DIAMETERIA 48 500 IN	ADTH: LENGT	H: 500 IN	(3670.3 MM)
WEIGHT STILL CO.	UANTITI.	69553	0.3730	(9.5250 MM)	(1	1231.9 MM)		

MHU 2157346: LOT 245158B1: 12 pieces;

Certified Specifications

AMS-QQ-A-250/12/RevA

ASTM B 209/Rev14

AMS 4045/RevL CMMP 025/RevV

Test Code: 1512 Cast 534 Lot: 245158B1

SI

Drop 25

Test Results

Ingot 5

Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:

Temper T651

Dir / # Tests LT / 3 (Min:Max) Ultimate KSI (MPA) 85.5:85.8

Yield KSI (MPA) 75.8:76.0

Elongation % 13.3:13.5

(590:592)

(523:524)

(ASTM E1251)

Chemistry: Actual(wt%)

FE 0.17 CU 1.5 MG 2.5

ZN 5.8

ZR

OTHER

MAX

0.05

0.15

0.04

MN

CR 0.19

TI 0.03

0.02 0.01

0.03

TOT

EACH

TOT

0.10 ALLOY LIMITS

ZR OTHER ٧ TI ZN CR MG MN CU FE SI 0.00 0.00 0.00 5.1 0.18 2.1 0.05 7075 0.00 0.05 1.2 0.20 0.00 0.28 6.1 0.00 MIN(wt%) 2.9 0.30 2.0 0.50 0.40 MAX(wt%)

Aluminum Remainder

ORDER_COMMENTS AMC CA-15409 R 3





Trentwood Works - Spokane, WA 99215 Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number 4481839

CERTIFICATION

Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order:

* has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.

All test equipment and measuring devices are calibrated and certified in accordance expliciable specifications. For material thicknesses outside specification it fracture.

* was malted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.872-1(a).

was malted in the United States of America or a quentying scalar per domestic content.

has been thermally processed in compliance with AMS 2772, where applicable.

has been thermally processed in compliance with AMS 2772, where applicable.

is mercury free, within the limits of detection of ASTM £1215 (<1ppm).

is mercury free, within the limits of detection of ASTM £1215 (<1ppm).

is in compliance with RoHS 2, European Union Directive 2011/85/EU.

is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.

is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.

is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.

is in compliance with RoHS 2, European Union Directive 2011/85/EU.

is in compliance with RoHS 2, European Union Directive 2011/85/EU.

is ree of Conflict Minarals, as defined in Section 15.2 of the Dodd-Frank Act.

is free of weld repair.

meets the reporting requirements of EN10204, Type 3.1.

meets the reporting requirements of EN10204, Type

es demennay JAMES HEMENWAY, TECHNICAL PROCESS MANAGER

Page 2 of 2°

INTERORG TRANSFER PACKING SLIP/ CERTIFICATE OF CONFORMANCE

Page 1 of 1

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications pair of the description.

Test reports are on file subject to examination. All claims for detective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material to the correct size, or material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material to the correct size, or material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material to the correct size, or material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. for credit.

Reviewed by Authorized Castle Metals Representative:

Data Printed: 20-NOV-2017 04:38:15 PM

SHIP TO: A M CASTLE & CO 14001 ORANGE AVE P.O. BOX 1402 PARAMOUNT, CA 90723

SOLD TO:

AM CASTLE & CO- SOLD TO 1420 KENSINGTON RD SUITE 220 OAK BROOK, IL 60523

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215 Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number 4481839

CUSTOMER PO NUMBER:	WOF	RK PACKAGE:	CU 75	STOMER PAR	T NUMBER:	1	1040	070/8		NTRACT NUMBER:	
438454-1 KAISER ORDER NO:		SHIP DATE:		7075	CLAD: BARE	TEMPE T651		Sawed P	late	E DETICTH:	
MEIGH! SIM!	QUANTITY: 12 PCS E		6955		0.3750	9.5250 I	9	48.500 IN	231.9 MM)	144.500 IN	(3670.3 MM)

MHU 2157346: LOT 245158B1: 12 pieces;

Certified Specifications

AMS-QQ-A-250/12/RevA

ASTM B 209/Rev.14

AMS 4045/RevL CMMP 025/RevV

Cast 534

Drop 25

Test Results

Ingot 5

Melted in USA

(ASTM E8/B557)

Test Code: 1512

Lot: 245158B1

(EN 2002-1)

Tensile:

7075

MIN(wt%)

MAX(wt%)

Temper T651

Dir / # Tests LT / 3 (Min:Max) Ultimate KSI (MPA) 85.5:85.8

(590:592)

Yield KSI (MPA) 75.8:76.0

(523:524)

Elongation % 13.3:13.5

(ASTM E1251)

Chemistry: Actual(wt%)

FE SI 0.17 0.10

CU 1.5

2.0

MG 2.5 ZN

TI

0.00

0.50

MN 0.04

CR 0.19

0.03 5.8

ZN

5.1

6.1

0.01

V

0.00

0.05

ZR 0.02 TOT

ALLOY LIMITS

MG

2.1

2.9

FE SI

0.00

0.40

MN CU 0.00 1.2 0.30

CR 0.18

0.28

TI 0.00

0.20

ZR OTHER EACH 0.00

0.05

TOT

ORDER_COMMENTS AMC CA-15409 R 3

Aluminum Remainder



OTHER

0.03

MAX

0.05

0.15



Trentwood Works - Spokane, WA 99215 Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number 4481839

CERTIFICATION

- Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order:

 * has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.

 All test equipment and measuring devices are calibrated and certified in accordance applicable specifications. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. Reported elongation values have been measured as elongation at fracture.

 **was malted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content.

was melted in the United States of America or a quantying domestic content.
 has been thermally processed in compliance with AMS 2772, where applicable.
 has been thermally processed in compliance with AMS 2772, where applicable.
 is mercury free, within the limits of detection of ASTM E1215 {<1ppm}.
 is mercury free, within the limits of detection of ASTM E1215 {<1ppm}.
 is in compliance with RoHS 2, European Union Directive 2011/85/EU.
 is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.
 is free of Conflict Minerals, as defined a Section 15.2 of the Dodd-Frank Act.
 is free of weld repair.
 is free of weld repair.
 materials are reporting requirements of EN10204, Type 3.1.
 materials are reporting requirements of EN10204. Type 3.1.
 materials are reporting requirements of the Conflict Minerals and Conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in a few reporting requirements of the Conflict Minerals and Conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in a few reporting requirements of the Conflict Minerals and Conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in the conflict of the Conflict Minerals and Conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in the Conflict Minerals and Conditions of sale.

JAMES HEMENWAY, TECHNICAL PROCESS MANAGER

INTERORG TRANSFER PACKING SLIP/ CERTIFICATE OF CONFORMANCE

Page 1 of 1

		9388496	ROLLED PRODUCTS	121446201
		Heat Number	Mill/Source	Delivery No.
width (IN) Length (IN) Shipped Qty(LBS)	a BCC	END USER: DART ACHOSTACE END USE: COMMERCIAL AIRCRAFT PARTS	ENDU	
CP70	ro.com	Email P/s and certs to: clavoie@dartaero.com	Email I	(
#S	ING MARKINGS EX:HEAT #'S	ALL PAPERWORK MUST HAVE IDENTIFYING MARKINGS EX:HEA	ALL PA	Details
T RECEIVE AT TIME OF DELIVERY	2.00 F CO			
2.00 PCS	Ordered City	Part Number	Order No	Purchase Orde
ALUMINUM PLATE SAW SPECIFICATIONS. AND COMPANY OF THE PROPERTY	ALUMINUM PLATE SAW S			
(+.0620/0000 IN) X 144.5 IN ()	CUT 2SIDED TO 1.5 IN (+	/50412.WO	ω	4952710
SOOD PT 7075.T651.ALUMINUM.USI.48.5000.144.5000	Description 1 5000 PI 7075 T651 ALUI		Line No	Order No
	Final Destination Branch -		ils	Shipment Details
			O in City	71-AON-07
3442525-2	YRC	Freight Terms Prepaid	F.O.B.	Date Shipped
BOL No				
DART AEROSPACE LID 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	CO. AVENUE CA 90723	Ship From: A. M. CASTLE & CO. 14001 ORANGE AVENUE PARAMOUNT, CA 90723 USA
Deliver To:	Ship To:	POL TO:		
Shipment No:3442525				

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

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Date Printed: 20-NOV-2017 04:38:15 PM

Date:

Name:





CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

S н P

A M CASTLE & CO.

14001 ORANGE AVE. PARAMOUNT CA 90723 LIS

S 0 L D T 0 A M CASTLE

1420 KENSINGTON ROAD, SUITE 220 OAK BROOK IL 60523 US

Pg 1of2 0 Serial:20170828-0110564184 INCLUSION 4075 110564184 A M CASTLE CERTIFICATION Constellium ORDER NO. "Constellium Rolled Products, hereby certifies that CUSTOMER PURCHASE ORDER NO. & ITEM metal shipped under this order has been 204514 420826 inspected and found in conformance with the requirements of the applicable specifications as LENGTH. indicated herein. Any warranty is limited to that WHATH TEMPER GAUGE CLAD 144.50000 in ALLOY 48.50000 in 1.50000 in 38.10 mm shown on Constellium Rolled Products' standard T651 7075 3.670 mm 1,232 mm General Terms and Conditions of Sales, Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC ITEM ORDERED SPEC PLATE, SAWED 859 Century Road MILL FINISH P.O. BOX 68 RAVENSWOOD, WV 26164 USA CUSTOMER SPECIFICATION AMS QQ-A-250/12A DATE SHIPPED B/L NUMBER PART NUMBER 08/28/2017 86053 750412 GOVT. CONTRACT NO. NO. OF PIECES WT. SHIPPED Steve Good - Laboratory Manager 000004 4240.000 LB

ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:

ASTM B594 REV 13 2013 100% SONIC W/ 0.125"DEADZONE Class A

AMS-STD-2154A 2012 TYPE1 CLASS A 100% SONIC MINUS DEADZONE

BSS-7055B 2013 CLASS A 100% SONIC TESTED MINUS DEADZONE CSTI006 REV E 2011 CLASS A 100% SONIC MINUS DEADZONE DPS 4.713 REV AK 2012 CLASS A 100% SONIC MINUS DEADZONE GAMPS 9101 REV B 2006 CLASS A 100% SONIC MINUS DEADZONE PS 21211P 2010 CLASS A 100% SONIC MINUS DEADZONE

Load Details			1 -4	Piece	Serial	Parent Lot
Package	Net Lbs	Kg	Lot		Ochai	
	1,060.000	480.808	9388496	01		
1001522468	*	480.808	9388496	02		
1001522468	1,060.000		9388496	03		
1001522468	1,060.000	480.808				
1001522468	1,060.000	480.808	9388496	04		
Lot: 9388496	γ					

Tensile - Room	Temperat	ure (US)	(VCI)	Yield (K	SI)	Elongatio	n (%)	Report
		Ultimate	Max	Min	Max	Min	Max	
Direction	Tests	Min		70.9	72.2	12.0	12.5	
LT	02	80.8	81.8	10.9	1 4. 4.			Name of the last o







CERTIFIED TEST REPORT Constellium Rolled Products

A M CASTLE & CO. S н 14001 ORANGE AVE. PARAMOUNT CA Р 90723 US O 110564184

s Ö D O Ravenswood, LLC

A M CASTLE 1420 KENSINGTON ROAD, SUITE 220 OAK BROOK IL 60523 US

Pg 2of2

Serial:20170828-0110564184 INCLUSION 4075 A M CASTLE CERTIFICATION Constellium ORDER NO. "Constellium Rolled Products, hereby certifies that CUSTOMER PURCHASE ORDER NO. & ITEM metal shipped under this order has been 204514 inspected and found in conformance with the 420826 requirements of the applicable specifications as LENGTH indicated herein. Any warranty is limited to that WIDTH TEMPER GAUGE 144.50000 in ALLOY CLAD 48.50000 in shown on Constellium Rolled Products' standard 1.50000 in T651 3,670 mm General Terms and Conditions of Sales. Test 7075 1,232 mm 38.10 mm reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC ITEM ORDERED SPEC PLATE, SAWED 859 Century Road P.O. BOX 68 MILL FINISH RAVENSWOOD, WV 26164 USA CUSTOMER SPECIFICATION AMS QQ-A-250/12A DATE SHIPPED B/L NUMBER PART NUMBER 08/28/2017 86053 750412 GOVT. CONTRACT NO. NO. OF PIECES WT. SHIPPED 000004 4240,000 LB

Steve Good - Laboratory Manager

Ultimate (N/MW/2) Min Max Min Max	Report	(%)	ation	Elongation	N/MM2)	Yield (45.175.48.473	ıre (SI)	Temperat	Tensile - Room
		Max		Min		Min	(N/MINIZ)			
Direction Tests Min Max Min 12.0 12.5		12.5		12.0	498					Direction

Chemistry (Actual)

ZR TI ZN CR MN MG FE CU 0.00 0.03 5.50 0.21 0.04 2.63 0.08 0.18 1.41 Core

OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER

All material contained in this lot was cast and manufactured in the USA

QUALITY TEXTS: AMC CA-15403A R 7

> THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

CHEMISTRY BY OES: ARKSPARK

CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399

WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557 DUNS Number: 090570149; CAGE Code: 1YWL9

Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the "FND OF CERTIFICATION"

INTERORG TRANSFER PACKING SLIP/ CERTIFICATE OF CONFORMANCE

Page 1 of 1

		9383590	ROLLED PRODUCTS	121446201
	Mech Id PC3	Heat Number	Mill/Source	Delivery No.
(IN) Length (IN) Shipped Oty(LBS)		END USE: COMMERCIAL AIRCRAFT PARTS	END US	
かしなっ	ro.com	Email P/s and certs to: clavoie@dartaero.com	Email P/	
	ALL PAPERWORK MUST FOLLOW ORDER / COSTOMER MOST FIEDER / S	ALL PAPERWORK MUST FOLLOW ORDER / COSTOWIED WOS	ALL PAP	Details
EIVE AT TIME OF DELIVERY	2.00 PCS		- 1	38327
2.00 PCS	Ordered Oty	Part Number		Purchase Order No
CUT 2SIDED TO 2.25 IN (+ .0620/0000 IN) X 144.5 IN () - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12	ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-28	/50488.MO	4	4952710
UM.USI.48.5000.144.5000	Description 1 7550 BI 7075 T651 ALUMINUM.USI.48.5000.144.5000	Item No	Line No	Order No
TOR	Final Destination Branch - To		ls	Shipment Details
		Prepaid	ORIGIN	20-NOV-17
BOL No 3442525-2	Carrier	Freight Terms	F.O.B.	Date Shipped
1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	ENUE 0723	A. M. CASTLE & CO. 14001 ORANGE AVENUE PARAMOUNT, CA 90723 USA
DART AEROSPACE TO	Ship To:	Sold To:	10	Ship From:

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material out, of the correct size, or material out, or material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material out, of the correct size or material out. Trifling a part of the description.

Date:

Name:

Date Printed: 20-NOV-2017 04:38:15 PM Reviewed by Authorized Castle Metals Representative





CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

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A M CASTLE & CO.

14001 ORANGE AVE. PARAMOUNT CA 90723 US

s 0 D

A M CASTLE

1420 KENSINGTON ROAD, SUITE 220 OAK BROOK IL 60523 US

0

A M CASTLE

110516970

4075

INCLUSION

Serial:20170322-0110516970

Pg 1of3

CUSTOMER PURCHASE ORDER NO. & ITEM

Constellium ORDER NO. 198377

CLAD ALLOS 7075

TEMPER GAUGE 1.75000 in T651 44.45 mm

WIDTH 48.50000 in 1,232 mm

J ENGTH 144.50000 in 3,670 mm

ITEM ORDERED SPEC PLATE, SAWED MILL FINISH

CUSTOMER SPECIFICATION AMS QQ-A-250/12A

PART NUMBER 750488

B/L NUMBER 77792

DATE SHIPPED

03/22/2017

WT. SHIPPED 9940.000 LB

NO. OF PIECES 000008

GOVT, CONTRACT NO.

CERTIFICATION

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Salas, Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road

P.O. BOX 68 RAVENSWOOD, WV 26164 USA

Steve Good - Laboratory Manager

ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:

ASTM B594 REV 13 2013 100% SONIC W/ 0.125"DEADZONE Class A

AMS 4045K AMS-STD-2154A 2012 TYPE1 CLASS A 100% SONIC MINUS DEADZONE

ASTM B209-14 BSS-7055B 2013 CLASS A 100% SONIC TESTED MINUS DEADZONE CST1006 REV E 2011 CLASS A 100% SONIC MINUS DEADZONE DPS 4.713 REV AK 2012 CLASS A 100% SONIC MINUS DEADZONE GAMPS 9101 REV B 2006 CLASS A 100% SONIC MINUS DEADZONE

PS 21211P 2010 CLASS A 100% SONIC MINUS DEADZONE

Load Details

Details						Daniel Lab
Package	Net Lbs	Kg	Lot	Piece	Serial	Parent Lot
1001476359	1,245.000	564.722	9383589	01		
1001476359	1.245.000	564.722	9383589	02		
1001476359	1,245.000	564.722	9383589	03		
	1,245.000	564.722	9383589	04		
1001476360	1,240.000	562.454	9383590	01		
1001476361	1,240.000	562.454	9383590	02		
1001476361	*	562,454	9383590	03		
1001476362	1,240,000	562.454	9383590	04		
1001476362	/ 1,240.000	302.434	2000030	0.		

Lof: 9383589

Tensile - Room Temperature (US)

sile - Room	Temperat	ture (US) Ultimate		Yield (K	SI)	Elongation	(%)	Report
Discontinue	Tests	Min	Max	Min	Max	Min	Max	
Direction	02	78.2	79.8	68.2	69.6	12.0	12.5	
LI	UZ	10.2						







CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

A M CASTLE & CO. S н 14001 ORANGE AVE. PARAMOUNT CA P 90723 T 0

110516970

S 0 D 0 A M CASTLE

Serial:20170322-0110516970

1420 KENSINGTON ROAD, SUITE 220 OAK BROOK IL 60523 US

A M CASTLE Constellium ORDER NO. CUSTOMER PURCHASE ORDER NO. & ITEM 198377 LENGTH WIDTH TEMPER GAUGE CLAD ALLOY 1.75000 in T651 7075

44.45 mm

4075

144.50000 in 48.50000 in 3 670 mm 1.232 mm

INCLUSION

ITEM ORDERED SPEC PLATE, SAWED MILL FINISH

CUSTOMER SPECIFICATION AMS QQ-A-250/12A

PART NUMBER 750488

B/L NUMBER 77792

DATE SHIPPED 03/22/2017

WT. SHIPPED 9940,000 LB

NO. OF PIECES 800000

GOVT. CONTRACT NO.

CERTIFICATION

Pg 2of3

"Constellium Rolled Products, hereby cartifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road

P.O. BOX 68 RAVENSWOOD, WV 26164 USA

Steve Good - Laboratory Manager

Tensile - Room Temperature (SI)

nsile - Room	Temperat		(N/MM2)	Yield (N	/MM2)	Elongation	(%)	Report
Direction	Tests	Min	Max	Min	Max	Min	Max	
LT	02	539	550	470	480	12.0	12.5	

Chemistry (Actual)

CU MN FE 0.07 0.21 1.47 0.04 Core

CR MG 2.49 0.20 ZN 5.57

ZR TI 0.01 0.04

OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER

All material contained in this lot was cast and manufactured in the USA

Lot: 9383590

Tensile - Room Temperature (US)

12	ile - Room	temperat	Ultimate	(KSI)	Yield (K	SI)	Elongation	(%)	Report
	Direction	Tests	Min	Max	Min	Max	Min	Max	
	LT	02	78.9	79.0	68.3	70.4	11.5	12.0	
	L 1	45							





CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

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A M CASTLE & CO.

14001 ORANGE AVE. PARAMOUNT CA 90723 US

T651

S 0 Ł n

A M CASTLE

1420 KENSINGTON ROAD, SUITE 220 OAK BROOK IL 60523

CERTIFICATION

"Constellium Rolled Products, hereby certifies that

metal shipped under this order has been

inspected and found in conformance with the requirements of the applicable specifications as

indicated herein. Any warranty is limited to that

shown on Constellium Rolled Products' standard

General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Revenswood, LLC

859 Century Road

P.O. BOX 68 RAVENSWOOD, WV 26164 USA

т 0

T a

413045

ALLOY

7075

A M CASTLE

110516970

4075

INCLUSION

198377

Serial:20170322-0110516970

Pg 3of3

CUSTOMER PURCHASE ORDER NO. & ITEM

TEMPER GAUGE

WIDTH 48.50000 in 1.75000 in 1,232 mm 44,45 mm

LENGTH 144.50000 in 3,670 mm

Constellium ORDER NO.

ITEM ORDERED SPEC PLATE, SAWED MILL FINISH

GLAD

CUSTOMER SPECIFICATION AMS QQ-A-250/12A

PART NUMBER 750488

B/L NUMBER 77792

DATE SHIPPED

03/22/2017

WT. SHIPPED 9940.000 LB

NO. OF PIECES 800000

GOVT. CONTRACT NO.

Steve Good - Laboratory Manager

Tensile - Room Temperature (SI)

nsile - Koom	tempera		(N/MM2)	Yield (N	/MM2)	Elongation	(%)	Report
Direction	Tests	Min	Max	Min	Max	Min	Max	
Direction	02	544	545	471	485	11.5	12.0	

Chemistry (Actual)

Core

FΕ CU 0.07 0.21 1.47 0.04

MN

CR MG 0.20 2.49

ZN 5.57 T

0.04

ZR 0.01

OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER

All material contained in this lot was cast and manufactured in the USA

QUALITY TEXTS: AMC CA-15403A R 7

> THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

CHEMISTRY BY OES: ARKSPARK

CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399 WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8: 8557

DUNS Number: 090570149; CAGE Code: 1YWL9

Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product. "END OF CERTIFICATION"

INTERORG TRANSFER PACKING SLIP/ CERTIFICATE OF CONFORMANCE

Page 1 of 1

Shipment No:3442525

				/			_	~						1	
121446201	Delivery No.				\	Details	38327	Purchase Order No		4952710	Order No	Shipment Details	20-NOV-17	Date Shipped	Ship From: A. M. CASTLE & CO. 14001 ORANGE AVENUE PARAMOUNT, CA 90723 USA
KAISER ALUMINUM	Mill/Source	END US	END US	Email P	ALL MA	ALL PAI		rNo		ග	Line No	S	ORIGIN	F.O.B.	& CO. BE AVENUE CA 90723
70099487	Heat Number	END USE: COMMERCIAL AIRCRAFT PARTS	END USER: DART AEROSPACE	Email P/s and certs to: clavoie@dartaero.com	ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HE.	ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUS		Part Number		750616.MO			Prepaid	Freight Terms	Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA
N	Mech Id PCS Wi			o.com	'ING MARKINGS EX:HEAT #'S			Ordered Qty	PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12	CUT 2SIDED TO 7 IN (+.(Description	Final Destination Branch	YHC	Carrier	Ship To: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN
SP P P	Width (IN) Length (IN) Shipped City(LBS)	-		S-1-1-5	#S	RECEIVE AT TIME OF DELIVERY	2.00 PCS	Invoice Qty	IONS: AMS-QQ-A-250/12	CUT 2SIDED TO 7 IN (+ .0620/0000 IN) X 144.5 IN () - ALUMINUM	MINITIM LIST 48 E000 144 5000	ch - TOR	3442525-2	BOL No	Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the naterial, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material curve the correct size, or material curve material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material, including any specifications forming a part of the description.

Reviewed by Authorized Castle Metals Representative:

Date Printed: 20-NOV-2017 04:38:15 PM

Name:

Date:

.27

SHIP TO:

A M CASTLE & CO 14001 ORANGE AVE P.O. BOX 1402 PARAMOUNT, CA 90723

SOLD TO:

AM CASTLE & CO- SOLD TO 1420 KENSINGTON RD SUITE 220 OAK BROOK, IL 60523



Trentwood Works - Spokane, WA 99215 Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number 4477064

CUSTOMER PO NUMBER: 432157-1		WORK PACKAGE:				STOMER PAR	T NUMBER:		• • • • • • • • • • • • • • • • • • • •	RUN/LOAD: 033/20	GOV'T CONTRACT NUMBER:		
KAISER ORDER NO: SHIP DA 1241278-1 7-SEF			7.22			TEMPE T651	R:	PRODUCT DESCRIPTION: KaiserSelect Plate					
WEIGHT SHIPPED: 2850 LB	QUANTI 2 PCS						GAUGE: 2.0000 IN (50.8000 MM)		DIAMETER/WII 48.500 IN (12	DTH: 31.9 MM)	LENGTH: 144.500 IN	(3670.3 MM)	

MHU 2140341: LOT 700994B7: 1 pieces; MHU 2144256: LOT 238206B7: 1 pieces; EROSPACE 3LA

Certified Specifications

AMS 4045/Revt ASTM B 209/Rev14 BSS 7055/RevB DPS 4.713/RevAK PS 21211/RevP AMS-QQ-A-250/) 2/RevA ASTM B 594/Rev13 CMMP 025/RevV GAMPS 9101/RevB/AmdSCN1 AMS-STD-2154/RevC BAC 5439/RevJ CSTI 006/RevE GSS16100/RevG/Amd1

Test Code: 1512 Lot: 238206B7 Cast 498

Drop 40

Test Results Ingot 4

Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:

Temper T651 Dir / # Tests LT / 2 (Min:Max)

ests Ultimate K

Ultimate KSI (MPA) 80.1:80.3 Yield KSI (MPA) 69.9: 70.4 Elongation %

(552:554)

(482:485)

(ASTM E1251)

Chemistry: Actual(wt%) Lot: 700994B7

SI FE 0.10 0.21 Cast 498 CU MN 1.4 0.06 Drop 19 MG CR 2.5 0.20 Ingot 3 ZN TI V 5.6 0.03 0.01 Parent Lot: 231142B1

V ZR 0.01 0.01

OTHER TOT 0.03 Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile: Temp

Temper Dir / # Tests
T651 LT / 2 (Min:Max)

Ultimate KSI (MPA) 78.4: 78.5

(541:541)

Yield KSI (MPA) 68.0:68.1

(469:470)

Elongation % 11.9 : 13.6

(ASTM E1251)

Chemistry: Actual(wt%) SI FE 0.08 0.16 CU 1.5

MN 0.04 MG 2.5

CR 0.19 ZN 5.7 TI V 0.03 0.01 ZR 0.01 OTHER



CERTIFIED TEST REPORT

Serial Number 4477064

Trentwood Works - Spokane, WA 99215 Phone: (800) 367-2586

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	٧	ZR	OTHER	MAX
7075 MIN(wt%) MAX(wt%)	0.00	0.00 0.50	1.2	0.00 0.30	2.9	0.18 0.28 emainder	6.1	0.00 0.20	0.00 0.05	0.00	EACH TOT	0.05 0.15

ORDER COMMENTS AMC CA-15403A R 7

TEST NOTES

Metal represented by this test report was 100% Type I (immersion) ultrasonically tested from one side with 3mm dead zones top and bottom and meets the Class A and Class B requirements of all specifications referenced on this test report. No surface marking of sonic indications is performed.

CERTIFICATION

Kalser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order:

* has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.

* All test equipment and measuring devices are calibrated and certified in accordance applicable specifications. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. Reported elongation values have been measured as elongation at fracture.

* was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for demands (content.)

was melted in the United States of Allienze to equallying decidence on the Content. As been thermally processed in compliance with AMS 2772, where applicable, is mercury free, within the limits of detection of ASTM E1215 (<1ppm). Is in compliance with RoHS 2, European Union Directive 2011/65/EU. Is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kalser regularly monitors these regulations for updates, is tree of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.

* Is free of weld repair.

* Is free of weld repair.

* meets the reporting requirements of EN10204, Type 3.1.

* meets the reporting requirements of EN10204, Type 3.1.

* meets the reporting requirements of EN10204, Type 3.1.

* Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in Any warranty is limited to that shown on Kaiser Aluminum laboratory. The recording of false, ficitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law. full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, ficitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: Z	<u>M70751657.000</u> X DEC N 6 2017	2.000 PO/BATCH NO.: 038327/5017382
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED:	74" 24"	THICKNESS ORDERED: 7.000 THICKNESS RECEIVED: 7.000 SHEET SIZE ORDERED: 7.000 X 2.000
QUANTITY REJECTED:	Ø	SHEET SIZE RECEIVED: 7.000 ×2.000

DESCRIPTION	(Ch	CR eck (N)	COMMENTS
SURFACE DAMAGE	Y	M	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(1)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	AMS-QQ:A-250/12
CORRECT THICKNESS	8	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	W	N	Heat # 10099487
CORRECT MATERIAL IDENTFICATION	(8)	N	
CORRECT M# ON THE MATERIAL	M	N	
DOES THIS MATERIAL REQUIRE		00	
ENGINEERING SIGN OFF	Υ	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING					

testers located in the Quality Office

DC 18 INSPECTION		ENGINEERING SIGNOF	F (if required)
INSPECTED BY:	al 8	SIGNED OFF BY:	
DATE:	DEC 0 6 2017	DATE:	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

۵ O REV. B N7S SHEET 1 OF 1 10.11.08 DATE 17.05.05 7075-TG SHEET/PLATE SPEC
COPYRIGHT BATG BT DATA EROSPACE LTD
COPYRIGHT BATG BT DATA EROSPACE LTD
COPYRIGHT BATG BT DATA EROSPACE LTD
COPYRIGHT BATG BT DATA EROSPACE AT DATA ERO DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
DRAWING NO. 8 B ADD: REF TO "PLATE" 1651" TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CAR16-149) M7075T6S DESCRIPTION CP ML LL ULL 17.05.05 NEW ISSUE MFG. APPR. APPROVED CHECKED DE APPR. DESIGN REV. **APPROVED** SPECIFICATION CONTROL DRAWING RELEASED 2017 JUN 19 47 WHERE ".TTT" = THICKNESS (IN INCHES)
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE) EG. 0.063" THICK SHEET = M707576S.063 EG. 3.5" WIDE BY 0.500" THICK PLATE = M707576S.500X3.500 PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE PURCHASE MATERIAL: 7075-T6/T62/T65/ ALUMINUM SHEET OR PLATE OO-4-250/12/DR AMS-QQ-A-250/12 UII AR-3 10/15 OR ASTM B209 QQ-A-250/13 OR AMS-QQ-A-250/13 OR AMS 4048 / 4049 OR ASTM B209 TIT BY 4FT BY 10FT FOR SHEET M7075T6S TTT X W.WWW THK WIDTH B PREFERRED SIZE: SPECIFICATION: SPECIFICATION: PART NUMBER: 8 **((® (@** O

MATERIAL RECEIPT INSPECTION FORM

MATERIAL:	M7075+651.750	x2.250 PO/BATCH NO.: 038327/5017381
DATE:	DFC 0 6 2017	-
MATERIAL CERT REC'D:	Ver	THICKNESS ORDERED: 1.750
QUANTITY RECEIVED:	17 24"	THICKNESS RECEIVED: 1.750
QUANTITY INSPECTED:	24'	SHEET SIZE ORDERED: 1.790 x 2.250
QUANTITY REJECTED:	8	SHEET SIZE RECEIVED: 1-250 x 2.250

		-	
DESCRIPTION		CR eck	COMMENTS
		N)	
SURFACE DAMAGE	Υ	(N)	
CORRECT FINISH	(8)	N	
CORROSION	Y.	(P)	
CORRECT GRAIN DIRECTION	8	N	
CORRECT MATERIAL PER M-DRAWING	(X)	N	AMS QQ -A-250/12
CORRECT THICKNESS	(1)	N	
PHOTO REQUIRED	Υ	(4)	
CORRECT REF # TO LINK CERT	(4)	N	Heat # 9383590 /9383589
CORRECT MATERIAL IDENTFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE			
ENGINEERING SIGN OFF	Υ	M	
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	Ń)	

CUT SAMPLE PIECE OF	MATERIAL A			SS CHECK.	
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY:	M 9	SIGNED OFF BY:
DATE:	DEC 0 6 2017	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

٥ O REV. B NTS SHEET 1 OF 17.05.05 10,11,08 RF DART AEROSPACE LTD
CP HAWKESBURY, ONTARIO, CANADA
ML DYAWING NO.
LL M7075T6S
WM TITLE SHEET/PLATE SPEC NT
DS-4 T075-T6 SHEET/PLATE SPEC NT DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
DRAWING NO.
R
M707516S COPPRIGHT © 2010 BY DART AEROSPACE LTD
THE DOOMER'S PRINT TO DOMERNING WORK SAFED OF FEMALE OF THE BRIESTS CORP.
THE TO BE USED OF UNIV. TARGED, THE CREEK COMP. B 胀 B ADD REF TO "PLATE" T651" TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CAR16-149) DATE 17.05.05 MFG. APPR. APPROVED DRAWN REV. DESIGN **APPROVED** SPECIFICATION CONTROL DRAWING MELEASED 2017 JUN 19 9 WHERE ".TTT" = THICKNESS (IN INCHES)
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE) EG. 0.063" THICK SHEET = M7075T6S.063 EG. 3,5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500 PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE PURCHASE MATERIAL: 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE QQ.A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 QQ.A-250/13 OR AMS-QQ-A-250/13 OR AMS 4048 / 4049 OR ASTM B209 TIT BY 4FT BY 10FT FOR SHEET M707516S TTT X W.WWW THK WIDTH A PREFERRED SIZE: SPECIFICATION: SPECIFICATION: A PART NUMBER: OR **8 (9**) **(9**) 1 O œ ⋖

MATERIAL RECEIPT INSPECTION FORM

MATERIAL:	170757651.500X1.500 DEC 0 8 2017	PO / BATCH NO.: 038327/5017380
MATERIAL CERT REC'D:	Ves	THICKNESS ORDERED: 1500
QUANTITY RECEIVED:	24"	THICKNESS RECEIVED: 1.500
QUANTITY INSPECTED:	2411	SHEET SIZE ORDERED: 1. 500 × 1-500
QUANTITY REJECTED:	Ø	SHEET SIZE RECEIVED: 1.500 x 1.500

	NIC	\D	
		CR	0011171170
DESCRIPTION	' '	eck	COMMENTS
	Y/:	N)	
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(1)	
CORRECT GRAIN DIRECTION	8	N	4
CORRECT MATERIAL PER M-DRAWING	Y	N	Ams QQ-A-250/er
CORRECT THICKNESS	8	N	
PHOTO REQUIRED	Υ	(M)	
CORRECT REF # TO LINK CERT	8	N	Hest# 9388496
CORRECT MATERIAL IDENTFICATION	8	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE		100	
ENGINEERING SIGN OFF	Υ	N	
DOES THIS REQUIRE AN		~	
EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF		ND PREFOR		SS CHECK.	
	HRC	HRB	DURA	DUR D	I WEBSTER
	HKC	пкв	DUKA	שאטע	WEDSIER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: 40 9	SIGNED OFF BY:
DATE: DÉC 0 6 2017	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Ω U CP HAWKESBURY, ONTARIO, CANADA
ML DRAWING NO.
LL M7075T6S SHEET 10F 1

WM TITLE
DS-LL STATE
DS-LL STATE
SCALE
OF ATTERNATION OF A STATE
SCALE
SC 17.05.05 COPYRIGHT © 2010 BY DART AEROSPACE LTD THE DOCUMENT SPRING ARC CONTROL AND THE NOT THE USE USE OF OF MY THE NOT THE USE OF OF ON ANY ENDOLED TO COPE OF CONTRANT TO NOT THE USE OF MESON THATE 10.11.08 DATE DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
DRAWING NO.
R
R707516S G G ADD REF TO "PLATE", TBS1" TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CAR16-149) DESCRIPTION 17.05.05 NEW ISSUE APPROVED
DE APPR.
DATE 17 MFG. APPR. DRAWN REV. DESIGN **APPROVED** SPECIFICATION CONTROL DRAWING MELEASED 2017 JUN 19 07 ECN 17-574 WHERE ".TIT" = THICKNESS (IN INCHES)
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE) EG. 0.063" THICK SHEET = M7075T6S.063 EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500 PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE PURCHASE MATERIAL: 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 QQ-A-250/13 OR AMS-QQ-A-250/13 OR AMS 4048 / 4049 OR ASTM B209 TTT BY 4FT BY 10FT FOR SHEET M7075T6S TTT X W.WWW THK WIDTH B PREFERRED SIZE: SPECIFICATION: SPECIFICATION: PART NUMBER: OR **(8)** 8 **B** 8 **8** O 60 0

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: DATE:	M7075+650.3	75 × 8,000 PO / BATCH NO.: 038327/5012378
MATERIAL CERT REC'D:	Ves	THICKNESS ORDERED: .375
QUANTITY RECEIVED:	1211	THICKNESS RECEIVED: . 375
QUANTITY INSPECTED:	12"	SHEET SIZE ORDERED: . 275 X 8-000
QUANTITY REJECTED:	8	SHEET SIZE RECEIVED: . 375 x 8-000

DESCRIPTION	(Ch	CR leck (N)	COMMENTS
SURFACE DAMAGE	Y	W	
CORRECT FINISH	(Y)	N	
CORROSION	Y	四	
CORRECT GRAIN DIRECTION	(4)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	Am5-QQ-A-250/12
CORRECT THICKNESS	(0)	N	
PHOTO REQUIRED	Y	M	
CORRECT REF # TO LINK CERT	(V)	N	Heat # 245158 B1
CORRECT MATERIAL IDENTFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	8	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	(3)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	R	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW							
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER		

testers located in the Quality Office

OC 18 INSPECTION	1		ENGINEERING SIGNOFF (if required)
INSPECTED BY:	IK BA	9	SIGNED OFF BY:
DATE:	DEC	0 6 2017	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING WHERE ".TTT" = THICKNESS (IN INCHES)
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE) EG. 0.063" THICK SHEET = M7075T6S.063 EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500 ĸ ⚠ PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE B PURCHASE MATERIAL: 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 QQ-A-250/13 OR AMS-QQ-A-250/13 OR AMS 4048 / 4049 OR ASTM B209 TIT BY 4FT BY 10FT FOR SHEET M707516S TTT X W.WWW THK WIDTH A PREFERRED SIZE: SPECIFICATION: SPECIFICATION: OR 1 **(9**)

MELEASED 2017 JUN 19 C

NTS REV. B SHEET 1 OF 10.11.08 17.05.05 RF DART AEROSPACE LTD
CP HAWKESBURY, ONTARIO, CANADA
ML DRAWING NO.
LL M7075T6S SHEET 10
WM TITLE SCA
DS-M TTTLE SPEC N COPYRIGHT © 2010 BY DART AEROSPACE LTD 胀 5 ADD REF TO "PLATE" "T651" TEMPER, AWS 4048, OPTIONAL WIDTH DIM (CAR16-149) 17.05.05 NEW ISSUE DRAWN
CHECKED
MFG. APPR.
APPROVED DE APPR. DESIGN 8 REV. **APPROVED**

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: _ DATE: _	M7075 +650-375×6.000 DEC 0 6 2017	PO/BATCH NO.: 038327/S017377
MATERIAL CERT REC'D:	Ves	THICKNESS ORDERED: 0.375
QUANTITY RECEIVED:	12"	THICKNESS RECEIVED: 0.375
QUANTITY INSPECTED:	12'	SHEET SIZE ORDERED: 37576"
QUANTITY REJECTED:	B	SHEET SIZE RECEIVED: -375×611

DESCRIPTION	١,	CR eck N)	COMMENTS
SURFACE DAMAGE	Υ	N	
CORRECT FINISH	(Y)	N	
CORROSION	Υ	(N)	
CORRECT GRAIN DIRECTION	(4)	N	
CORRECT MATERIAL PER M-DRAWING	W	N	Ams QQ-A-250/12
CORRECT THICKNESS	8	N.	
PHOTO REQUIRED	Y.	(A)	
CORRECT REF # TO LINK CERT	(Y)	N	Heat It 245158B1
CORRECT MATERIAL IDENTFICATION	8	N	
CORRECT M# ON THE MATERIAL	(N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	B	
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW								
TYPE OF MATERIAL SIZE OF TEST SAMPLE								
HARDNESS / DUROMETER READING								

testers located in the Quality Office

QC 18 INSPECTION			ENGINEERING SIGNOFF (if require	≘d∣
INSPECTED BY:	DAS DAS		SIGNED OFF BY:	
DATE:	DECT	6 2017	DATE:	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Ω O REV. B 17.05 05 10.11.08 DATE PF DART AEROSPACE LTD
CP HAWKESBURY, ONTARIO, CANADA
ML M7075T6S SHEET 10
WM TITLE
SCA
DS-M 7075-T6 SHEET/PLATE SPEC N 90 BY 분 B ADD REF TO "PLATE" T651" TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CAR16-149) DESCRIPTION APPROVED WM
DE APPR. DS
DATE 17.05.05 NEW ISSUE MFG. APPR. CHECKED DRAWN DESIGN REV. **APPROVED** SPECIFICATION CONTROL DRAWING PELEASED 2017 JUN 19 0 WHERE ".TTT" = THICKNESS (IN INCHES)
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE) EG. 0.063" THICK SHEET = M7075T6S.063 EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500 PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE PURCHASE MATERIAL: 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE QQ-A-250/12 OR AMS QQ-A-250/12 OR AMS 4045 OR ASTM B209 QQ-A-250/13 OR AMS-QQ-A-250/13 OR AMS 4048 / 4049 OR ASTM B209 TIT BY 4FT BY 10FT FOR SHEET M7075T6S TTT X W.WWW THK WIDTH SPECIFICATION: SPECIFICATION: PART NUMBER: 9 **(9**) **8** <n 4 **8** ۵ O B

3

00

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: <u>M70757651.250×20</u> 00 DATE: <u>DEC 0 6 7017</u>	PO / BATCH NO.: <u>038327 /SO173</u> 79
QUANTITY RECEIVED: 1214 QUANTITY REJECTED: 1214 QUANTITY REJECTED: 1214	THICKNESS ORDERED: 1.250 THICKNESS RECEIVED: 1.250 SHEET SIZE ORDERED: 1.250 x 2.000 SHEET SIZE RECEIVED: 1.250 x 2.000

DESCRIPTION	(Ch	CR leck (N)	COMMENTS
SURFACE DAMAGE	Y	M	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(1)	
CORRECT GRAIN DIRECTION	(A)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	Am 5 QQ-A-250
CORRECT THICKNESS	Y	N	
PHOTO REQUIRED	Y	N	
CORRECT REF # TO LINK CERT	8	N	Next # 9600883
CORRECT MATERIAL IDENTFICATION	(1)	N	
CORRECT M# ON THE MATERIAL	(0)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	(Z)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW								
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER			
SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING								

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: k) DAS	SIGNED OFF BY:
DATE:	DEC 0 6 2017	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Ω O REV. B SHEET 1 OF 1 17 05.05 10.11.08 7075-T6 SHEET/PLATE SPEC DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
DRAWING NO.
F
M7075T6S
SHEE G G RF B ADD, REF TO "PLATE" TG51" TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CAR16-149) 09 LL DE APPR. DS-유유 MFG. APPR. APPROVED CHECKED REV. DESIGN DRAWN **APPROVED** SPECIFICATION CONTROL DRAWING 2017 JUN 19 9 RELEASED WHERE ".TT" = THICKNESS (IN INCHES) AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE) EG. 0.063" THICK SHEET = M7075T6S.063 EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500 ⚠ PURCHASE MATERIAL: 7075-76/762/7651 ALCLAD ALUMINUM SHEET OR PLATE B PURCHASE MATERIAL: 7075-T6/T620651 ALUMINUM SHEET OR PLATE SPECIFICATION: QQ-A-250/12 OR ASTM B209 QQ-A-250/13 OR AMS-QQ-A-250/13 OR AMS 4048 / 4049 OR ASTM B209 TIT BY 4FT BY 10FT FOR SHEET M707516S TTT X W.WWW THK WIDTH A PREFERRED SIZE: SPECIFICATION: B PART NUMBER: 8 **@ @** ۵ U



PURCHASE ORDER PO038327

NOV 1 0 2017

Tel (613) 632-5200

Supplier: MEC002-VU

Metaux Castle

P.O. Box 4090 Stn A

Toronto

M5W OE9 Canada

1270 Aberdeen Street

Hawkesbury

ON

Ship To:

K6A 1K7 Canada Phone: 613-632-5200 PO No:

PO038327

PO Date:

11/10/17

11/28/17

Due Date: Purchase Order

Revision:

Revision Date:

Ship-To Contact:

Lavoie, ChantalPhone:

clavoie@dartaero.com

Via:

Ground

Pymt Terms:

Net 30

Freight Terms:

Special Comments:

					Spec	ial Comm	nents:				
					Items						
Line Item	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity	Received Quantity		Unit Price (USD)	Extended Price
1	M7075T6S0.375X6.000		7075-T6S Sheet .375" Thick Plate X 6" Wide		Firmed	11/28/17	12 ft	DF	12 ft	\$25.68/ft	\$308.16
			MATERIAL: 7075- T6/T62 ALUMINUM SHEET AS PER QQ-A- 250/12 OR AMS-QQ-A- 250/12 OR AMS 4045 OR ASTM B209					50	7	12	
2	M7075T6S0.375X8.000	: : : : : : : : : : : : : : : : : : :	MATERIAL: Wide MATERIAL: WIGHER AS WER QQ-A- 50/12 OR MS-QQ-A- 50/12 OR MS 4045 WR ASTM WIGHER ASTM		Firmed '	11/28/17	12 ft	OR C	12 ft	\$30.75/ft	\$369.00
3	M7075T6S1.250X7.000	SI X	075-T6 heet 1.25" 7.000" rder Pre	F	irmed 1	1/28/17	50 ft	0 ft 50Ft	50 ft	\$44.65/ft \$	2,232.50



PURCHASE ORDER PO038327

Tel (613) 632-5200

				1	tems						I
Line	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
Item	Fait	- 1.00	Cut To								
			50.00"								
			MATERIAL:								
			7075- T6/T62						,	(
			ALUMINUM					1	7	1	
			SHEET AS				01	2	1	1.	
			PER QQ-A- 250/12 OR				(())	7			
			AMS-QQ-A-				X	1			
			250/12 OR AMS 4045				0.				
			OR ASTM								
			B209								
	10-	J I	receive ft		1		1	,			
	te note: cut to size 12 po	cs @ 50	7075-T6		Firmed 1	1/28/17	12 ft	0 ft	12 ft	\$20.12/ft	\$241.4
4	M7075T6S1.250X2.0	00 -	Sheet					100	1		
			1.250" X					1 St		~	
			2.000"					1	2.0	117	
			MATERIAL:					/	TYT	10	
	A.		7075- T6/T62					X			
			ALUMINUM						*		
			SHEET AS PER QQ-A-								
			250/12 OR								
			AMS-QQ-A- 250/12 OR								
			AMS 4045								
			OR ASTM B209								
			receive ft								
5	M7075T6S1.500X1.50	od/	7075-T6S	-	Firmed 1	1/28/17	24 ft	0 ft	24 ft	\$21.06/ft	\$505.44
			Sheet 1.5" Thick Plate					NIV	t		
			X 1.5" Wide					291			
			: MATERIAL:)
			7075-						20	12	
			T6/T62						1/1	10	
			ALUMINUM SHEET AS					3	KI		
			PER QQ-A-								
			250/12 OR AMS-QQ-A-								
		:	250/12 OR								
			AMS 4045 OR ASTM					,			
		-	3209								
		(eceive ft		Same of A	1/20/47	24.6	Oft	24 ft	\$28.62/ft	\$686.88
6	M7075T6S1.750X2.25		7075-T6 Sheet	F	irmed 1	1/28/1/	24 ft	UIT	12/	φ <u>ε</u> 0.02/π	\$500.00
		1	1.750" X					700	040		
		2	2.250"		2	1	10	on	1		
		:		1) 17	10	1				



PURCHASE ORDER PO038327

Tel (613) 632-5200

						-	Order	Received		Unit	Extend
Line Item	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity		Balance	Price (USD)	Price
			MATERIAL:								
		1/	7075-								
	/	1	T6/T62 ALUMINUM		[[
			SHEET AS								
			PER QQ-A-								
			250/12 OR		1 1						
			AMS-QQ-A-								
			250/12 OR								
			AMS 4045								
			OR ASTM								
			B209								
			receive ft					I			6074
7	M7075T6S.050	-	7075-T6		Firmed	11/28/17	48 sf	0 sf	48 sf	\$7.791666/sf	\$374
7	W/7073103.030		Sheet .050								
			MATERIAL:								
			7075- T6/T62								
			ALUMINUM								
			SHEET AS								
			PER QQ-A-								
			250/12 OR								
			AMS-QQ-A-								
			250/12 OR				,	,			
			AMS 4045								
			OR ASTM								
			B209				/				
			feceive sf				/	0.4	1,2 ft	\$66.00/ft	\$792.
8	M17-4-B1.500X02.250		17-4 SS Bar		Firmed	11/28/17	√ 12 ft	Oft	L 1211	\$00.00/H	ψ1 J&.
			1.50 X2.250					124		11-25	
			MATERIAL:					10			
			17-4 PH SS							26	_
			BAR AS							11 7	1
			PER AMS						0	11/0	
			5604/5643					1	1XX	1 1	
			GRAIN					(1	11		
			MUST BE					X	2		
			ALONG LENGHT					U			
			OF BAR								
			MIN. YIELD								
			TENSILE								
			STRENGTH								
			= 100 KSI								
			MIN.								
			ULTIMATE								
			TENSILE								
			STRENGTH								
	/		= 150 KSI receive ft								
tem Note	note 1.5" x 2.50" accep		eceive it				/				
	M7075T6S7.000X2.000		7075-T6S	F	Firmed 1	1/28/17	24 ft	0 ft	24 ft	\$78.52/ft \$	1,884.
9	M/U/5165/.000X2.000	, - (Sheet 7"	'	,,,,,,,,,,,		_ , ,,		01-1		
			Thick Plate					~ (AV	4		
			(2" Wide					14			
		,						. / 3.			



PURCHASE ORDER PO038327

Tel (613) 632-5200

Items											
Line	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extende Price
tem			MATERIAL:								
			7075-							- 1	
			T6/T62				1			1	7
			ALUMINUM						0/	1 +	
			SHEET AS					(1		
1			PER QQ-A-					1	V	4	
			250/12 OR					O.K.	1		
			AMS-QQ-A-				1 1	01			11
1			250/12 OR	1							11
			AMS 4045								(6/
1			OR ASTM				1 1				ANTO
			B209								(JX
1			receive ft								- 1
1		1 1		,	,				(Grand Total:	\$7,393.9

Order Notes

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

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